

6 Degrees of freedom controller with capability of tactile feedback

Patent Number: US5589828

Publication date: 1996-12-31

Inventor(s): ARMSTRONG BRAD A (US)

Applicant(s):

Requested Patent: WO9318475 *PCT Family member*

Application Number: US19920847619 19920305

Priority Number(s): US19920847619 19920305

IPC Classification: G05G9/00

EC Classification: G05G9/047B, G06F3/02A3P, G06F3/033Z8D4, G06F3/033Z8D6, H01H25/00

Equivalents:

Abstract

Described and shown is a six degree of freedom physical to electrical converter with capability of tactile feedback, specifically, a human hand operated input controller with the capability of vibration feedback in the handle. Two embodiments, each capable of translating complex three dimensional linear and rotational forces into their constituent orthogonal vectors are described and shown. Also described and shown are various different sensor types which can be implemented in the embodiments. The embodiments have physical space between sensors and actuators maintained by resilient means, enabling tactile feedback (vibration) to be induced directly in the handle without erroneously activating sensors.

Data supplied from the **esp@cenet** database - I2

BEST AVAILABLE COPY